

I CLAIM:

heat sink

1. A heat sink assembly, comprising:

2 a circuit board having a mounting pad provided with an adhesive material in a mounting region;

4 a mounting plate formed of a thermally conductive material and defining a plurality of adhesive flow openings therethrough, said mounting plate having a first major surface being positioned on said mounting pad of said circuit board;

6 a heat dissipation element thermally connected to said mounting plate and being spaced from said circuit board; and

8 a heat generating component mounted on said mounting plate at a second major surface opposite said first major surface.

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2. A heat sink assembly as claimed in claim 1, wherein said adhesive material is electrical solder.

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3. A heat sink assembly as claimed in claim 1, wherein said adhesive material is thermal adhesive.

4. A heat sink assembly as claimed in claim 1, wherein said heat dissipation element includes:

2 an extension generally perpendicular to said mounting plate in a direction opposite said first

major surface; and

a portion generally parallel to said mounting plate and spaced therefrom.

5. A heat sink assembly as claimed in claim 4, wherein said portion overlies said
2 mounting plate.

6. A heat sink as claimed in claim 4, wherein said portion includes lateral
2 extensions.

7. A heat sink as claimed in claim 4, wherein said mounting plate and said
2 extension and said portion form a U shape.

8. A heat sink assembly as claimed in claim 4, wherein said mounting plate and said
2 extension and said portion form a Z shape.

sw v > 9. A heat sink assembly as claimed in claim 1, further comprising:
2 a channel along an edge of said mounting plate, said channel receiving a tab extending from
said heat generating component.

10. A method for mounting a heat sink with a heat generating component,
2 comprising the steps of:

applying a pad of adhesive material to a mounting region of a circuit board;

- 4 positioning the heat generating component on a first major surface of a mounting plate of a heat sink;
- 6 positioning a second major surface of the mounting plate of the heat sink on said pad of adhesive material at said mounting region of said circuit board; and
- 8 liquifying the adhesive material to flow through openings in said mounting plate to adhere said circuit board and said mounting plate and said heat generating component to one another.

11. A method as claimed in claim 10, further comprising the step of:

fastening said heat generating component on said first major surface of said mounting plate prior to said step of positioning said second major surface of said mounting plate on said pad of adhesive.

12. A method as claimed in claim 11, wherein said step of fastening is by crimping

- 2 a channel on said mounting plate onto a tab on said heat generating component.

13. A heat sink for a surface mounted heat generating component, comprising:

- 2 a mounting plate of a generally planer configuration defining a plurality of openings therethrough for adhesive flow through said openings;
- 4 an extension member extending generally perpendicular to said mounting plate;

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a heat dissipation element to said extension member, said heat dissipation element, said extension surface and said mounting plate being thermally conductive.

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